

# MA4X713 (MA713)

## Silicon epitaxial planar type

For switching

For wave detection

### ■ Features

- Two isolated elements are contained in one package, allowing high-density mounting
- Two MA3X704A (MA704A) is contained in one package (of a type in the same direction)
- Forward voltage  $V_F$ , optimum for low voltage rectification
- Optimum for high frequency rectification because of its short reverse recovery time  $t_{rr}$

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Reverse voltage	$V_R$	30	V
Maximum peak reverse voltage	$V_{RM}$	30	V
Peak forward current	Single	150	mA
	Double *		
Forward current	Single	30	mA
	Double *		
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

Note) \*: Value of each diode in double diodes used.

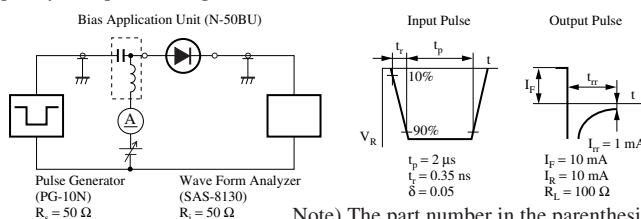
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	$V_{F1}$	$I_F = 1\text{ mA}$			0.4	V
	$V_{F2}$	$I_F = 30\text{ mA}$			1.0	
Reverse current	$I_R$	$V_R = 30\text{ V}$			1	$\mu\text{A}$
Terminal capacitance	$C_t$	$V_R = 1\text{ V}, f = 1\text{ MHz}$		1.5		pF
Reverse recovery time *	$t_{rr}$	$I_F = I_R = 10\text{ mA}$ $I_{rr} = 1\text{ mA}, R_L = 100\ \Omega$		1.0		ns
Detection efficiency	$\eta$	$V_{in} = 3\text{ V}_{(peak)}, f = 30\text{ MHz}$ $R_L = 3.9\text{ k}\Omega, C_L = 10\text{ pF}$		65		%

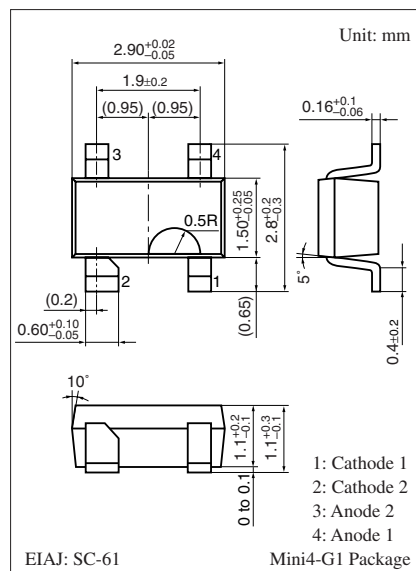
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.

3. Absolute frequency of input and output is 2 GHz.

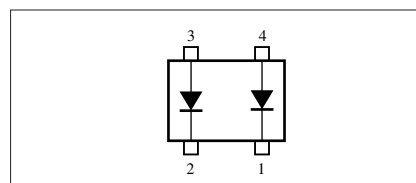
4. \*:  $t_{rr}$  measurement circuit

Note) The part number in the parenthesis shows conventional part number.

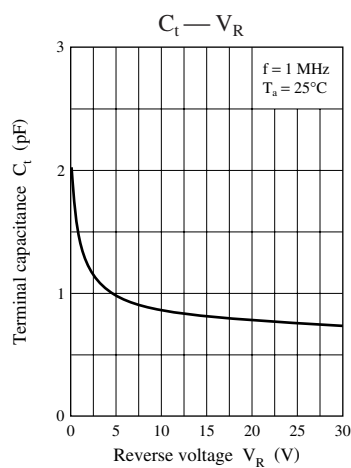
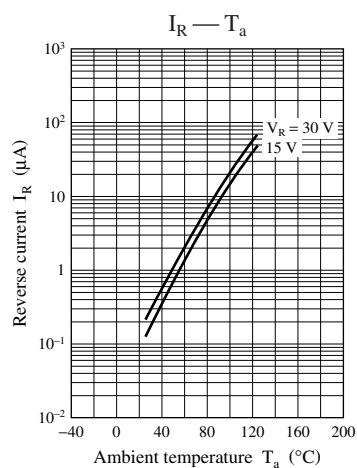
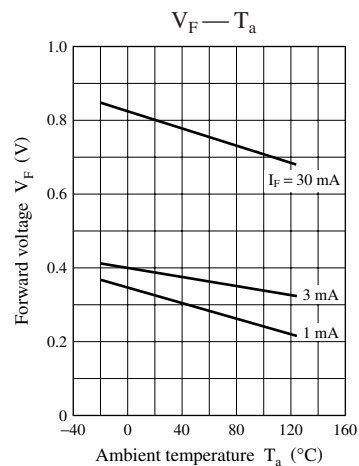
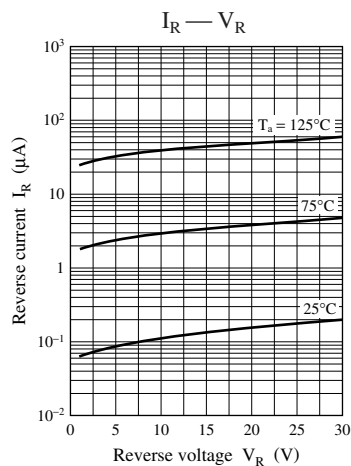
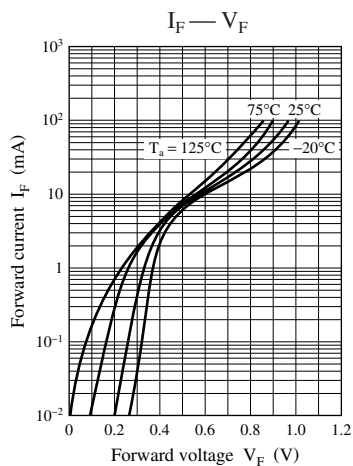


Marking Symbol: M1N

Internal Connection



## Characteristics charts between pins 1 and 4, 2 and 3



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